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BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

Project

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Author

TITLE

ANNUAL INSECT SURVEY

POWELL N.F.

1943

By

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Nov. 6, 1943

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SUBJECT-

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Insect

Panguitch, Utah
November 6, 1943

INSECT CONTROL SURVEY ON THE POWELL
NATIONAL FOREST & Fall, 1943

Results of the survey of the Black Hills beetle are as follows:

Unit Name	Percent Cruise	Approx. Acres Type Area	Total Ch. Strip	Strip Multiplier	N. A. on Strip	Total N. A.	N. A. per Ten Acres
Blue Fly No. 1	4.35	16,500	7180	22.98	21	483	0.29
Park No. 2	5.15	7,030	3620	19.42	5	97	0.14
Badger N. 3	5.02	7,130	3578	19.93	32	638	0.89
Blubber No. 4	5.31	6820	3621	18.83	7	132	0.19
Kanab No. 5	4.38	10,220	4475	22.84	26	594	0.58
Podunk No. 6	3.21	6,240	2079	30.01	5	150	0.24
Mill No. 7	5.77	6,900	3986	17.31	0	0	0
Cameron No. 12	2.81	2,720	765	35.55	9	320	1.18
Sweetwater No. 14	3.90	3,200	1246	25.68	1	26	0.08
Horse Creek No. 15	4.54	2,450	1113	22.01	3	66	0.27
Dark Valley No. 29	6.30	2,000	1259	15.88	11	175	0.87
Totals	4.61	71,210	32922		120	2681	

It is seen from a study of the table that there is still a considerable scattering of infestation of the Black Hills beetle, (*Dendroctonus ponderosae* Hopk.) on various control units of the Powell and it can also be seen that reduction of infestation is treated last bug year on control units 2, 14, and 15, is marked.

There has been no let-up in the aggressiveness of infestations on the forest since the epidemics were first noted in the Summer and Fall of 1935. Continued action from then until now has resulted in very definite control of the beetle but it must be emphasized that there must be no let-up in control measures or slackening of vigilance which would most certainly result in another wide-spread epidemic.

Newly attacked trees were heavily hit but most of those found were singles. There were occasional groups of two and three trees on the strips and none larger were found. We believe this condition is due, not to any decrease in the virulence of the beetles, but to control measures. All of the areas surveyed have been treated in past years, some once, but most of them several times.

Here is a comparison of units surveyed with last years results:

Unit No.	Infested Trees		Control	
	1943	1944		
1	561	483	Spring Control-Hot Spotting	Treated post season - 456 1187
2	1296	97	Winter Control	
3	242	638	No Control	
4	78	132	No Control	- 41 516 2,200
5	171	594	No Control	
6	62	150	No Control	
7	82	0	No Control	
14	220	26	Spring Control-Hot Spotting	
15	584	66	Winter Control	
	3296	2186		

The Spring control this year by locating trees through discoloration was not too effective because many of them did not turn color until after treating was discontinued. It will be important to determine whether we want to do any more of this type of work because the Kanab Unit consisting of about 10,000 acres has 600 trees scattered all over the entire area. Spotting for these trees will run into money and we would like a decision as to its feasibility. What we had in mind doing was leaving this unit for Spring control and attempting to pick up as many trees as possible through random spotting. The other units on which treating is indicated have more concentrated infestations and of course 100 percent spotting is in order.

The units we desire to treat with numbers of trees and time of treatment are as follows:

<u>Unit No.</u>	<u>No. of Trees</u>	<u>Time of Treatment</u>
1	483	Fall and Winter
3	638	Fall and Winter
5	594	Spring
12	320	Fall and Winter
29	175	Fall and Winter
Total	2210	

This survey was run by a crew of four men, from October 4 to November 6 and was made according to the procedure outlined by Senior Entomologist James C. Evenden in his paper, "Instructions for Conducting Extensive Bark Beetle Surveys by the Method of Sample Strips." Mr. Thomas Partridge who was our insect control foreman last winter, was Chief of Party, and Mr. Vane Sandine, Mr. Otto Sandine, and Mr. Ferrell Moosman, all of whom have bugged with us for a long time, were party members. The writer spent two days instructing the party thoroughly and checked them frequently. One week in October was lost because of storms.

All the strips in the upper East Fork area were tied into the new traverse pegs set in by Mr. Clark Miles last Summer and plotted on the 4 inch maps being mailed to the Regional Office. The small maps attached to this report show the areas surveyed and those on which treatment is required.

Survey costs chargeable to allotted funds are as follows:

Salaries:-	\$621.51
Mileage:-	<u>69.86</u>
Total	691.37

The average cost per tree for treating last year was \$4.98 and this may be somewhat higher this year because of wage and overtime increases. Possibly \$5.50 per tree will be about average. Figuring 2210 trees to be treated we will require \$12,155 to carry out the program as planned. We cannot say what the additional cost per tree would be for the 100 percent spotting in the Kanab Unit. That is the only way to get the bugs even though the initial cost may be more.

Right now it looks as though we can get all the labor we will need for the Fall and Winter projects and would like to start operations if possible not later than November 15. We are fortunate in being able to get the same spotting crew we had last year.

Submitted November 6, 1943

Lowell J. Farmer

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Insect Control Survey
Fall - 1943

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